

Appl. No. 10/535,270

Newkirk, Rex W.

Response to Official Action dated February 19, 2010

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Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of claims:

1. (currently amended) A process for producing inositol from plant materials comprising the steps of:

- (a) treating an aqueous slurry of plant material containing a mixture of neutral sugars, with a phytase enzyme to partially hydrolyze at least one of phytate, phytic acid and phytin to inositol phosphates that are negatively charged, under conditions which do not promote full hydrolysis to inositol[.];
- (b) separating said slurry into a water soluble fraction and a water-insoluble fraction[.];
- (c) separating said water soluble fraction into a first ionic fraction which contains anionic components comprising inositol phosphates and a first other fraction which contains neutral fractions containing said mixture of neutral sugars;
- (d) hydrolysing the inositol phosphates in said first ionic fraction; and
- (e) separating a hydrolyzed first ionic fraction into a second ionic fraction and a second neutral fraction which contains inositol.

2. (previously presented) The process of claim 1 wherein said phytase enzyme in step (a) does not include acid phosphatase.

3. (original) The process of claim 1 wherein said step of treating the aqueous slurry is

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carried out at a pH between about 3.0 and about 7.0.

4. (previously presented) The process of claim 3 wherein said phytase enzyme in step (a) includes acid phosphatase.

5. (original) The process of claim 1 wherein said step of separating the slurry into a water-soluble fraction and an insoluble fraction is carried out by centrifugation.

6. (original) The process of claim 1 wherein said step of separating the slurry into a water-soluble fraction and an insoluble fraction is carried out by filtration.

7. (previously presented) The process of claim 1, in which the step of hydrolyzing the inositol phosphates in said first ionic fraction comprises treatment of said first ionic fraction with phytase.

8. (previously presented) The process of claim 1, in which the step of hydrolyzing the inositol phosphates in said first ionic fraction comprises treatment of said first ionic fraction with acid phosphatase.

9. (original) The process of claim 8, wherein said hydrolysis is carried out at a pH of less than 4.

10. (previously presented) The process of claim 1, in which the step of hydrolyzing the inositol phosphates in said first ionic fraction comprises subjecting of said first ionic fraction in an absence of added phytase to conditions of temperature, pressure and pH which promote hydrolysis.

11. (previously presented) A process as claimed in claim 1, comprising the step of separating purified inositol from said second neutral fraction.

12. (previously presented) The process of claim 3, in which the step of hydrolyzing the inositol phosphates in said first ionic fraction comprises treatment of said first ionic fraction with phytase.

13. (previously presented) The process of claim 3, in which the step of hydrolyzing the

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inositol phosphates in said first ionic fraction comprises treatment of said first ionic fraction with acid phosphatase.

14. (previously presented) The process of claim 13, wherein said hydrolysis is carried out at a pH of less than 4.

15. (previously presented) The process of claim 3, in which the step of hydrolyzing the inositol phosphates in said first ionic fraction comprises subjecting of said first ionic fraction in an absence of added phytase to conditions of temperature, pressure and pH which promote hydrolysis.

16. (previously presented) A process as claimed in claim 3, comprising the step of separating purified inositol from said second neutral fraction.

17. (previously presented) The process of claim 4, in which the step of hydrolyzing the inositol phosphates in said first ionic fraction comprises treatment of said first ionic fraction with acid phosphatase, and wherein said hydrolysis is carried out at a pH of less than 4.

18. (previously presented) The process of claim 4, in which the step of hydrolyzing the inositol phosphates in said first ionic fraction comprises subjecting of said first ionic fraction in an absence of added phytase to conditions of temperature, pressure and pH which promote hydrolysis.

19. (previously presented) A process as claimed in claim 4, comprising the step of separating purified inositol from said second neutral fraction.

20. (previously presented) A process as claimed in claim 7, comprising the step of separating purified inositol from said second neutral fraction.